Abstract of the Disclosure

A method for the electron-microscopic observation of a semiconductor arrangement is provided. It includes providing an electron microscopy optics for imaging secondary electrons emanating from the semiconductor arrangement within an extended object field on a position-sensitive detector, providing an illumination device for emitting a primary energy beam, directing the primary energy beam to at least the object field for extracting there secondary electrons from the semiconductor arrangement. The semiconductor arrangement comprises a region with an upper surface provided by a first material and a recess with a high aspect ratio which is surrounded by the upper surface and has a bottom provided by a second material.